AUTODOC CLUB

How to change front coil springs on **AUDI A4 B8 Avant (8K5)** – replacement guide

SIMILAR VIDEO TUTORIAL

This video shows the replacement procedure of a similar car part on another vehicle

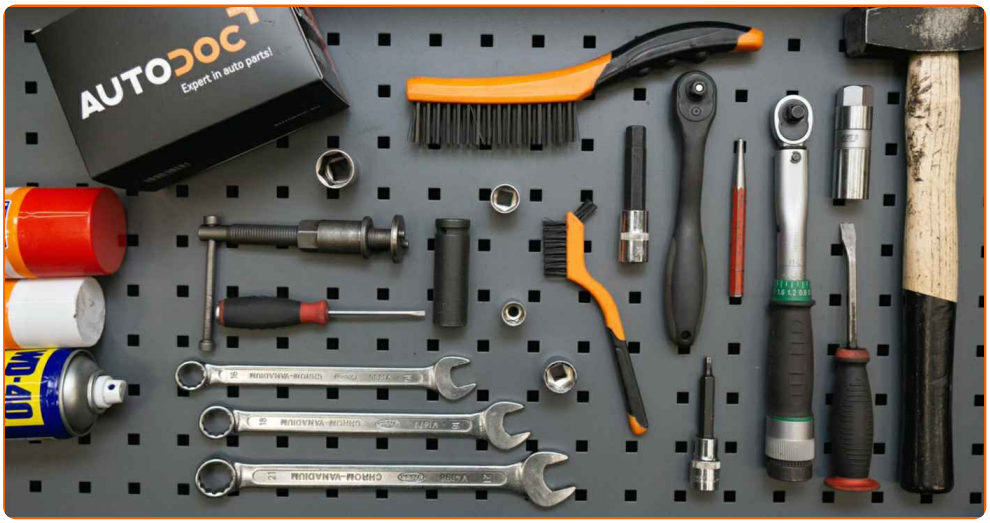
Important!

This replacement procedure can be used for:
AUDI A4 B8 Avant (8K5) 1.8 TFSI, AUDI A4 B8 Avant (8K5) 1.8 TFSI quattro, AUDI A4 B8 Avant (8K5) 2.0 TFSi, AUDI A4 B8 Avant (8K5) 2.0 TFSI, AUDI A4 B8 Avant (8K5) 2.0 TFSI quattro, AUDI A4 B8 Avant (8K5) 2.0 TFSI flexible fuel, AUDI A4 B8 Avant (8K5) 2.0 TFSI flexible fuel quattro

The steps may slightly vary depending on the car design.

This tutorial was created based on the replacement procedure for a similar car part on: AUDI A4 B8 Saloon (8K2) 2.0 TFSI Flexfuel quattro

REPLACEMENT: COIL SPRINGS – AUDI A4 B8 AVANT (8K5). LIST OF THE TOOLS YOU'LL NEED:



- Wire brush
- Nylon cleaning brush
- WD-40 spray
- Brake cleaner
- Copper grease
- Combination spanner #16
- Combination spanner #18
- Combination spanner #21
- Drive socket # 13
- Drive socket # 16
- Drive socket # 18
- Drive socket # 21
- HEX bit No.H6.
- HEX bit No.H18.
- Shock absorber socket
- Wheel impact socket #17
- Ratchet wrench
- Torque wrench
- Tap wrench
- Hammer
- Pin punch
- Flat Screwdriver
- Vice
- Crow bar
- Hydraulic strut spring compressor
- Hydraulic transmission jack
- Fender cover
- Wheel chock

Buy tools

Replacement: coil springs – AUDI A4 B8 Avant (8K5). AUTODOC recommends:

- Both coil springs of the front suspension should be replaced simultaneously.
- The replacement procedure is identical for the left and right coil springs of the front suspension.
- Please note: all work on the car – AUDI A4 B8 Avant (8K5) – should be done with the engine switched off.

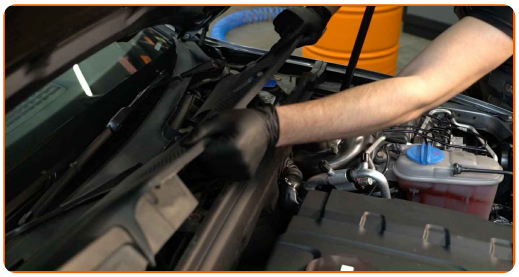
CARRY OUT REPLACEMENT IN THE FOLLOWING ORDER:

1 Open the bonnet.

2 Use a fender protection cover to prevent damaging paintwork and plastic parts of the car.

3 Remove the clips of the plastic cowl grille.

4 Raise up and remove the cowl grille.



5 Clean the fasteners of the shock strut upper mount. Use a wire brush. Use WD-40 spray.

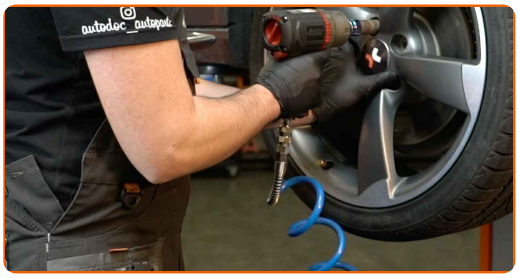
6 Loosen the upper fastener of the shock strut mount. Use a drive socket #16. Use a ratchet wrench.

7 Secure the wheels with chocks.

8 Loosen the wheel mounting bolts. Use wheel impact socket #17.

9 Raise the front of the car and secure on supports.

10 Unscrew the wheel bolts.



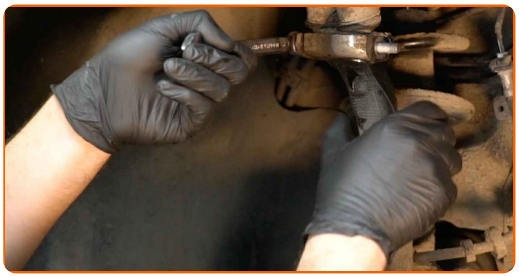
Replacement: coil springs – AUDI A4 B8 Avant (8K5). Tip:

- To avoid injury, hold up the wheel when unscrewing the bolts.

11 Remove the wheel.

12 Clean all joints of the arm. Use a wire brush. Use WD-40 spray.

13 Unscrew the upper control arm fasteners (2 pieces). Use a combination spanner #16. Use a drive socket #16. Use a ratchet wrench.

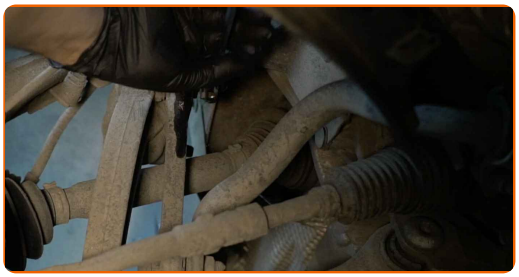


14 Clean the stabiliser link fasteners. Use a wire brush. Use WD-40 spray.

15 Undo the fastening nut that attaches the stabilizer link to the shock absorber fork. Use a combination spanner #16.

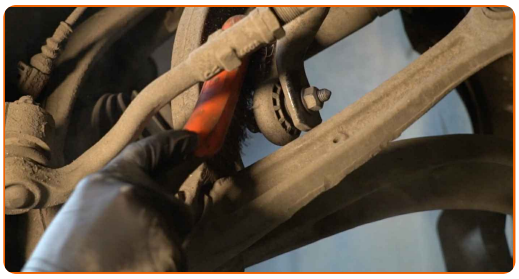
16 Clean the stabiliser link fasteners. Use a wire brush. Use WD-40 spray.

17 Unscrew the fasteners connecting the stabiliser link to the stabiliser bar. Use a combination spanner #16 (2 pieces).



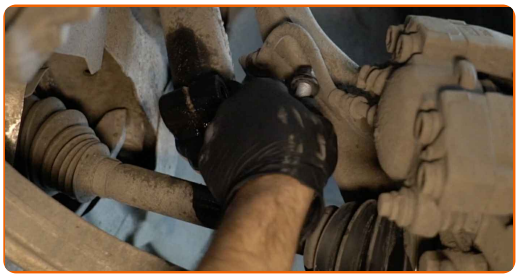
18 Remove the stabilizer rod.

19 Clean the shock strut fasteners. Use a wire brush. Use WD-40 spray.



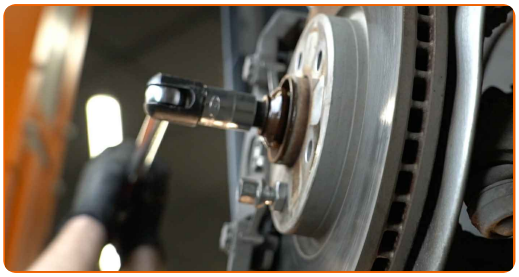
20 Unscrew the fastening bolt that connects the shock strut with the shock absorber fork. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.

21 Remove the fastening bolt.

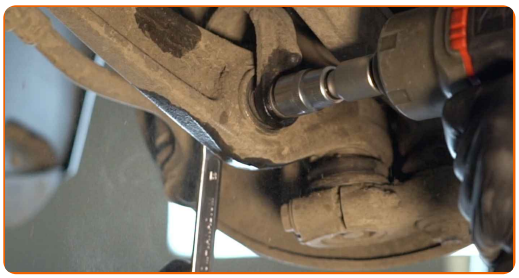


22 Clean the wheel hub fastener. Use a wire brush. Use WD-40 spray.

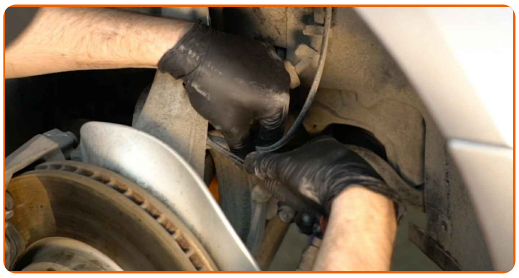
23 Unscrew the wheel hub axle nut. Use HEX No.H18. Use a tap wrench.



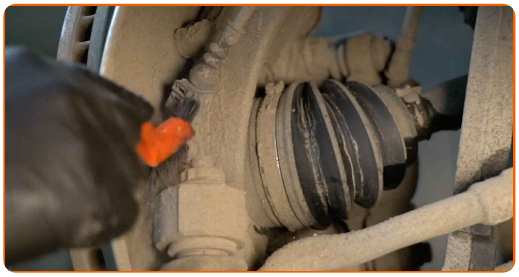
24 Unscrew the fastening bolt that connects the shock absorber fork with the lower control arm. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.



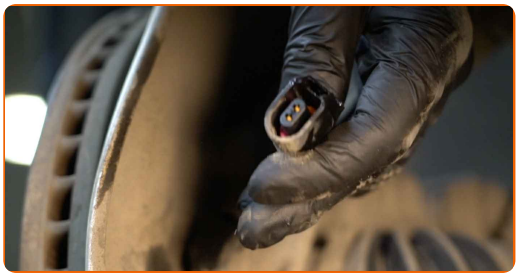
25 Disconnect the ABS sensor wiring. Use a crowbar.



26 Clean the ABS sensor connector. Use a nylon cleaning brush. Use WD-40 spray.



27 Detach the ABS sensor connector.



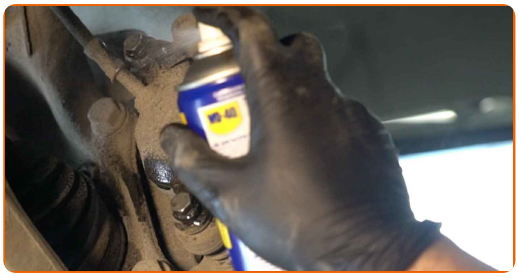
28 Remove the fastening bolt. Use a pin punch. Use a hammer.

29 Detach the upper control arm from the steering knuckle. Use a crowbar.

30 Prop up the steering knuckle. Use a hydraulic transmission jack.

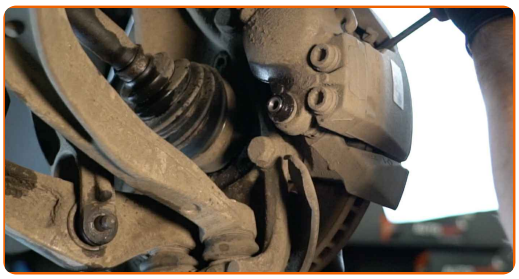
31 Disconnect the brake hose. Use a crowbar.

32 Clean the brake caliper fasteners. Use a wire brush. Use WD-40 spray.

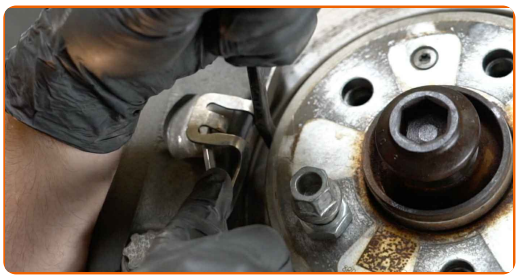


33 Unscrew the brake caliper fastening. Use a drive socket #13. Use a ratchet wrench.

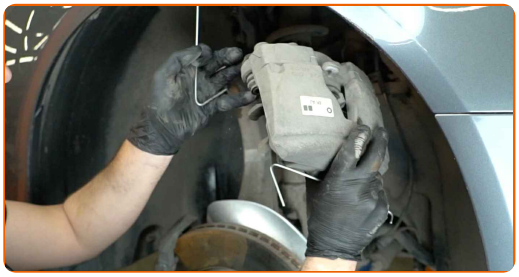
34 Spread the brake pads. Use a crowbar.



35 Detach the brake caliper retaining spring. Use a crowbar. Use a flat screwdriver.



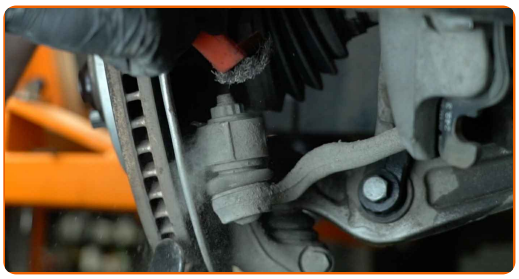
36 Remove the brake caliper.



Replacement: coil springs – AUDI A4 B8 Avant (8K5). AUTODOC experts recommend:

- Tie the caliper to the suspension or to the body with a wire without disconnecting from the brake hose to prevent depressurization of the brake system.
- Make sure that the brake caliper is not hanging on the brake hose.
- Don't press the brake pedal after the brake caliper has been removed. As a result, the piston can fall out from the brake cylinder, and brake fluid leakage and depressurization of the system may occur.
- Check the brake caliper bracket, brake caliper guide pins and boots. Clean them. Replace, if necessary.

37 Clean the fastener connecting the tie rod end to the steering knuckle. Use a wire brush. Use WD-40 spray.

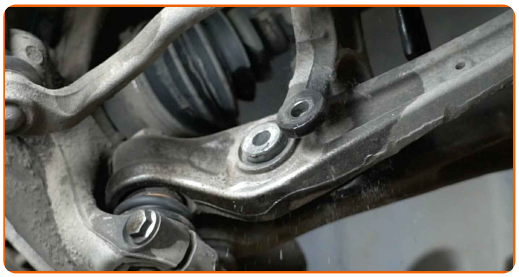


38 Unscrew the end fastening nut to the steering knuckle. Use a combination spanner #21.

39 Disconnect the tie rod end from the steering knuckle.

40 Remove the fastening bolt.

41 Detach the fastener that connects the shock strut to the control arm.



42 Unscrew the top fastening of the shock strut mount.

AUTODOC recommends:

- Important! Hold the suspension strut while unscrewing the fastening bolts. AUDI A4 B8 Avant (8K5)

43 Remove the suspension strut.

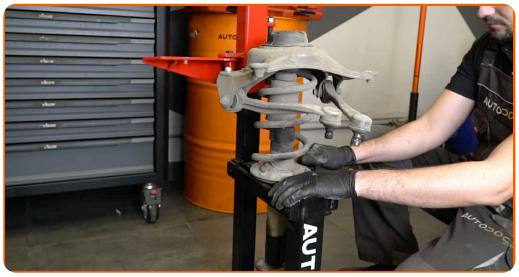
44 Grip the suspension strut assembled with the control arms in a vice.

45 Clean the shock strut fasteners. Use a nylon cleaning brush. Use WD-40 spray.

46 Undo the fastener that connects the shock strut with the shock absorber fork. Use a special drive socket to remove the shock absorber. Use a ratchet wrench.

47 Detach the shock absorber fork from the shock strut.

48 Set the shock absorber strut on the spring compressor tool.



Replacement: coil springs – AUDI A4 B8 Avant (8K5). Professionals recommend:

- Note that when using a spring compressor, spring coils need to be securely gripped, compressing the spring on the opposite sides.
- Ensure the correct position of the spring in the retainer.
- Make sure that the spring coils tightly entered the lock handles.

49 Compress the spring.

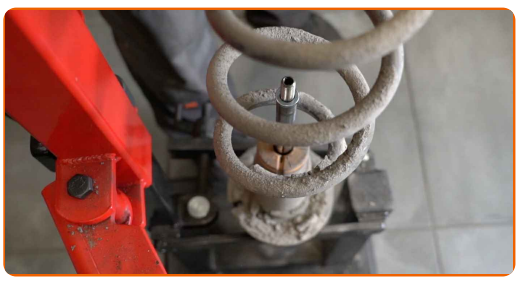
50 Treat the shock strut rod. Use a wire brush. Use WD-40 spray.

51 Remove the strut piston rod nut. Use a drive socket #18. Use HEX No.H6. Use a ratchet wrench.

52 Release the coil spring.

53 Remove the top strut mount.

54 Remove the spring.



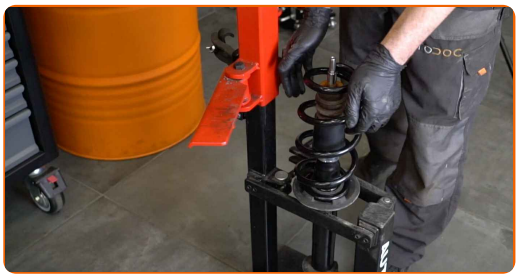
55 Remove the shock absorber dust cap and the bump stop.

AUTODOC recommends:

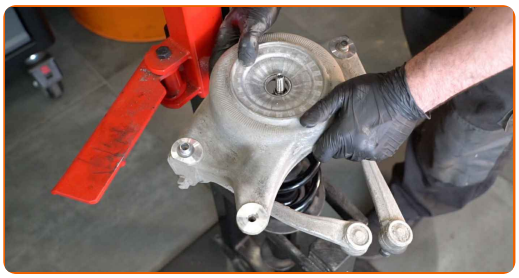
- Replacement: coil springs – AUDI A4 B8 Avant (8K5). Carefully inspect the mount, the boot, and the bump stop of the shock absorber. Replace if necessary.

56 Install the boot and a bump stop onto the shock absorber.

57 Install the spring on the shock absorber.



58 Install the upper strut mount and the strut mount bearing.



59 Compress the spring.

60 Tighten the shock strut piston rod nut. Use a drive socket #18. Use HEX No.H6. Use a torque wrench. Tighten it to 50 Nm torque.

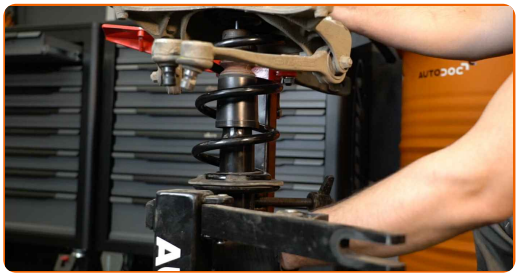
Replacement: coil springs – AUDI A4 B8 Avant (8K5). Tip:

- Check to make sure the spring is positioned correctly. Avoid its misalignment.

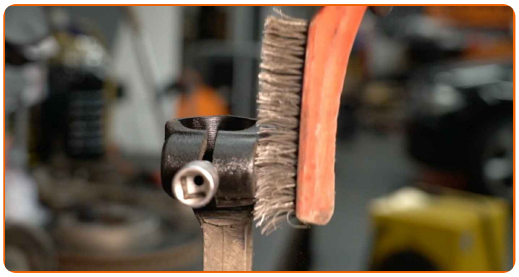
61 Treat the shock strut rod. Use copper grease.

62 Decompress the spring.

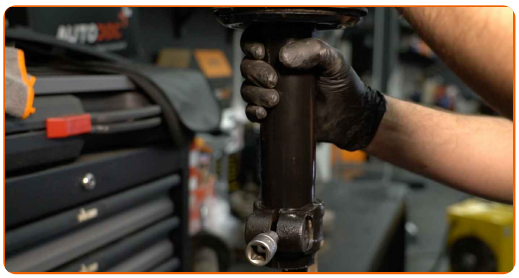
63 Remove the assembled shock strut.



64 Clean the mounting seats of the shock absorber fork. Use a wire brush. Use WD-40 spray.



65 Attach the shock absorber fork to the shock strut.

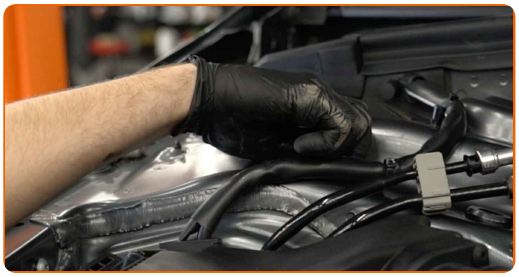


66 Treat the mounting seats of the shock strut. Use a wire brush. Use WD-40 spray.

67 Release the vice and remove the suspension strut assembled with the control arms.

68 Install the shock strut into the wheel arch.

69 Screw the top fastening of the shock strut mount. Do not tighten it.

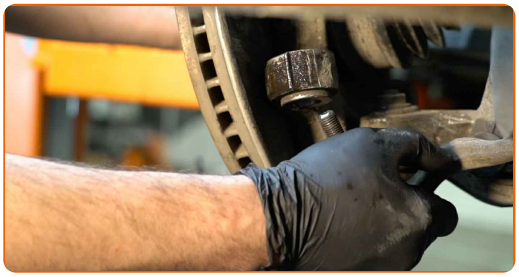


Replacement: coil springs – AUDI A4 B8 Avant (8K5). Tip from AUTODOC experts:

- To avoid injuries, hold the shock strut when screwing the fastening bolts in.

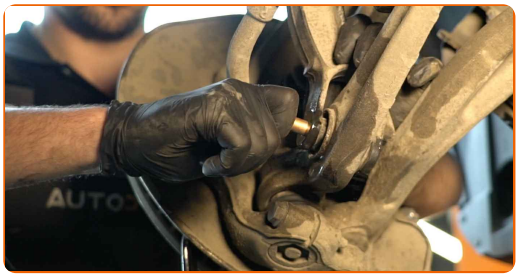
70 Clean the mounting seats of the tie rod end. Use a wire brush. Use WD-40 spray.

71 Connect the tie rod end to the steering knuckle.

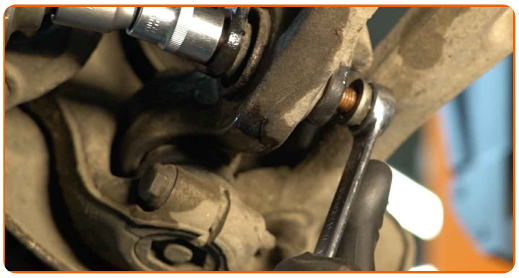


72 Clean the mounting seats and the thread of the suspension arm. Use a wire brush. Use WD-40 spray.

73 Install the fastening bolt.



74 Screw in the fasteners connecting the suspension strut fork to the lower control arm. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.

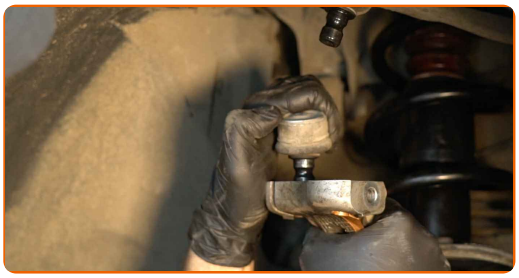


75 Remove the support from under the steering knuckle.

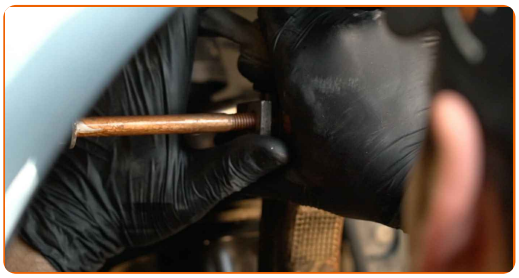
AUTODOC recommends:

- Replacement: coil springs – AUDI A4 B8 Avant (8K5). Lower the transmission jack smoothly, without jerks, to avoid damaging components and mechanisms.

76 Attach the upper control arm to the steering knuckle.



77 Install the fastening bolt.

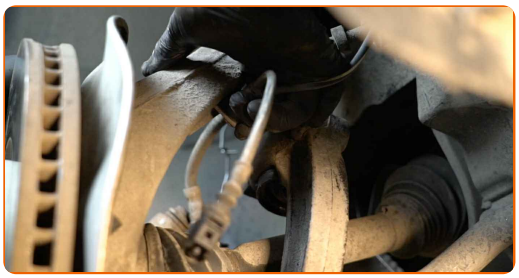


78 Screw in the fasteners (2 pieces) of the upper control arm. Use a combination spanner #16. Use a drive socket #16. Use a ratchet wrench.

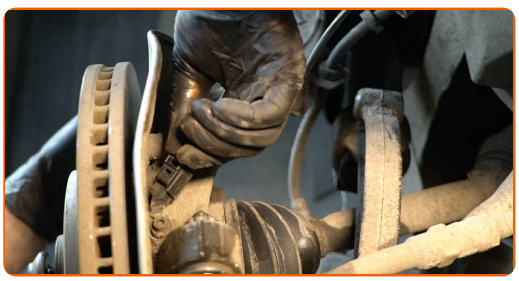
79 Screw on the fastening nut that connects the tie rod end to the steering knuckle. Use a combination spanner #21.

80 Attach the brake hose.

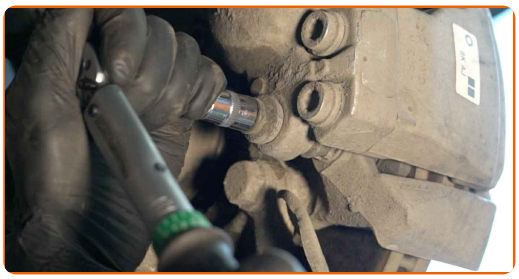
81 Connect the ABS sensor wiring.



82 Attach the ABS sensor connector.



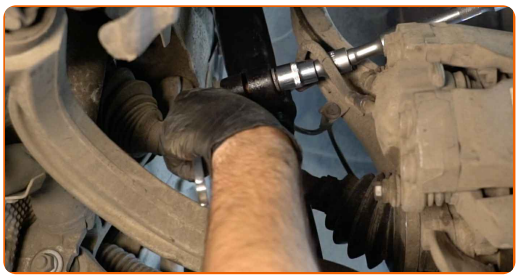
83 Install the brake caliper and fix it. Use a drive socket #13. Use a torque wrench. Tighten it to 30 Nm torque.



84 Install the brake caliper retaining spring.

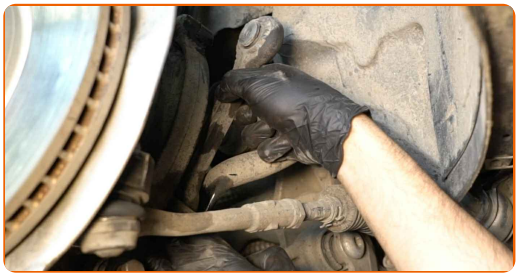
85 Install the fastening bolt.

86 Screw in the fasteners connecting the suspension strut to the suspension strut fork. Use a combination spanner #18. Use a drive socket #18. Use a ratchet wrench.

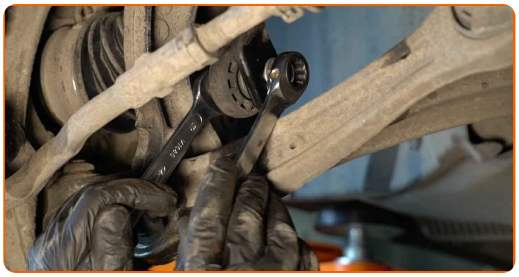


87 Clean the mounting seats of the stabiliser link. Use a wire brush. Use WD-40 spray.

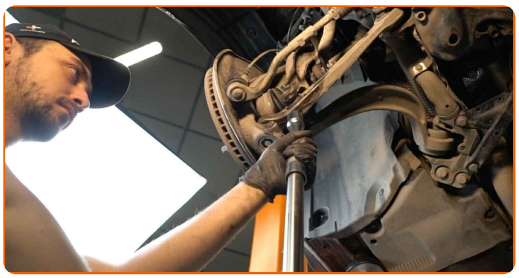
88 Install the transverse stabilizer link.



89 Tighten the stabiliser link fastener. Use a combination spanner #16 (2 pieces).



90 Support the arm. Use a hydraulic transmission jack.

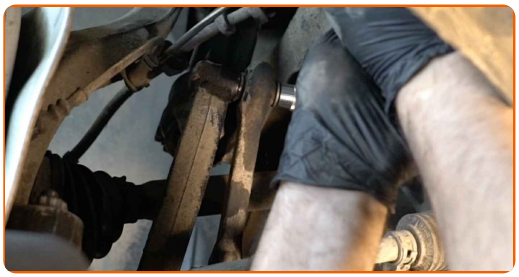


91 Tighten the fastener connecting the stabilizer link with the shock absorber fork. Use a combination spanner #16. Use a drive socket #16. Use a torque wrench. Tighten it to 40 Nm torque.+90°

AUTODOC recommends:

- Important! Be sure to use new fasteners.

92 Tighten the fastener connecting the stabilizer link to the stabilizer bar. Use a drive socket #16. Use a torque wrench. Tighten it to 40 Nm torque.+90°



AUTODOC recommends:

- Important! Be sure to use new fasteners.

93 Tighten the fastening bolt that connects the shock absorber fork to the lower control arm. Use a combination spanner #18. Use a drive socket #18. Use a torque wrench. Tighten it to 90 Nm torque.+90°

AUTODOC recommends:

- Important! Be sure to use new fasteners.

94 Tighten the fastening bolt that connects the shock strut with the shock absorber fork. Use a combination spanner #18. Use a drive socket #18. Use a torque wrench. Tighten it to 40 Nm torque.+180°

AUTODOC recommends:

- Important! Be sure to use new fasteners.

95 Remove the support from under the arm.

Replacement: coil springs – AUDI A4 B8 Avant (8K5). AUTODOC experts recommend:

- Lower the hydraulic transmission jack smoothly, without jerks, to avoid damaging assemblies and mechanisms.

96 Tighten the fastening nut connecting the tie rod end to the steering knuckle. Use a drive socket #21. Use a torque wrench. Tighten it to 100 nm torque.

97 Tighten the upper control arm fasteners (2 pieces). Use a combination spanner #16. Use a drive socket #16. Use a torque wrench. Tighten it to 40 nm torque.

98 Tighten the hub. Use HEX No.H18. Use a torque wrench. Tighten it to 200 nm torque.

99 Treat the shock strut fasteners. Treat all joints of the arm. Use copper grease.

100 Treat the surface where the brake disc contacts the wheel rim. Use copper grease.

101 Clean the brake disk surface. Use a brake cleaner.

AUTODOC recommends:

- Replacement: coil springs – AUDI A4 B8 Avant (8K5). After applying the spray, wait a few minutes.

102 Install the wheel.

Replacement: coil springs – AUDI A4 B8 Avant (8K5). Tip from AUTODOC:

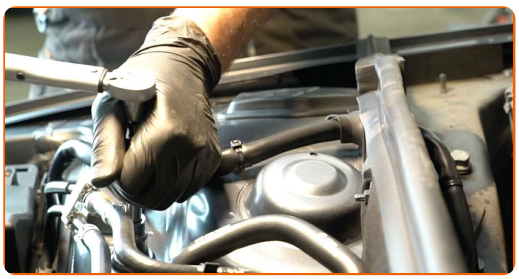
- To avoid injury, hold up the wheel when screwing in the fastening bolts.

103 Screw in the wheel bolts. Use wheel impact socket #17.

104 Lower the car and working in a cross order, tighten the wheel bolts. Use wheel impact socket #17. Use a torque wrench. Tighten it to 120 Nm torque.

105 Remove the jacks and chocks.

106 Tighten the upper fastener of the shock absorber strut mount. Use a drive socket #16. Use a torque wrench. Tighten it to 40 Nm torque.+90°

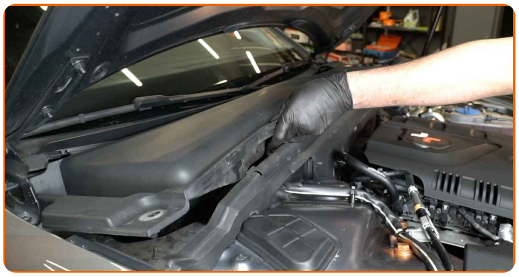


AUTODOC recommends:

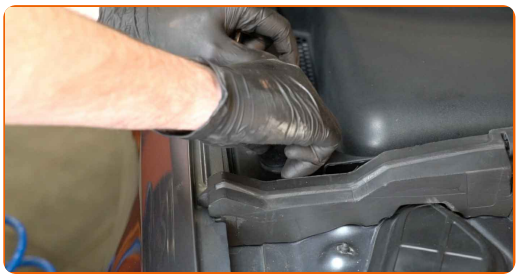
- Important! Be sure to use new fasteners.

107 Treat the fasteners of the shock strut mount. Use copper grease.

108 Install and secure the cowl grille.



109 Install the fasteners of the wiper plastic cowl grille.



110 Remove the fender protection cover.

111 Close the hood.

WELL DONE!

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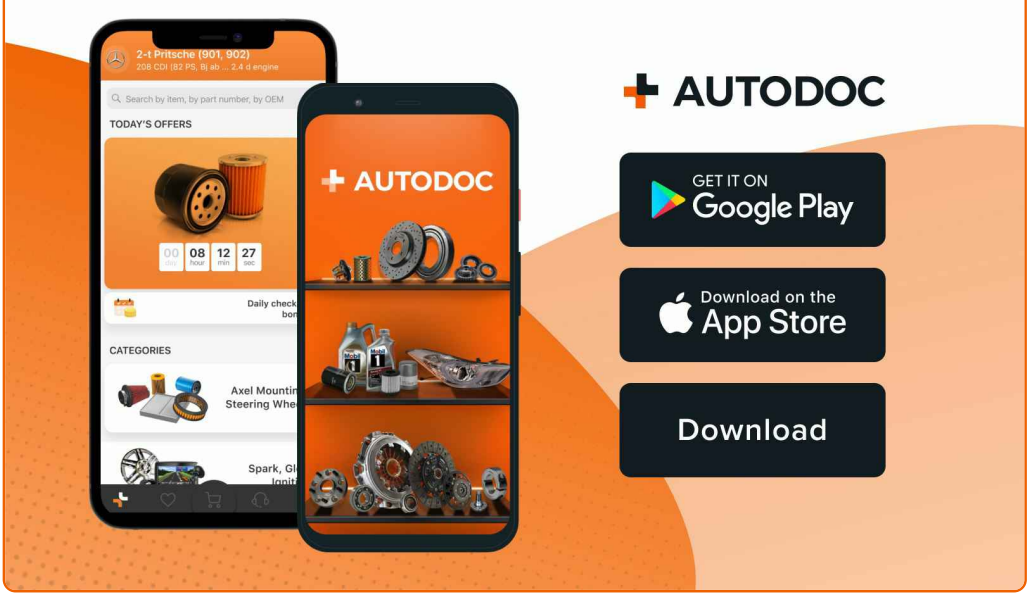

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